

AMENDMENTS TO THE CLAIMS

1. – 73. (Cancelled)

74. (New) Apparatus for treatment of skin, comprising:

an applicator having at least one protuberance comprising a skin-contacting surface; and
at least one optical radiation source coupled to said applicator in a manner so as to, when activated, deliver optical radiation through said skin-contacting surface to skin in contact with said skin-contacting surface;

wherein said at least one protuberance is shaped to apply a compressive force to said skin during use so as to extend at least partially below the skin surface to deliver said optical radiation to a target area.

75. (New) Apparatus as claimed in claim 1, wherein said applicator is in the form of a brush adapted to be moved over skin as said optical radiation is applied thereto.

76. (New) Apparatus as claimed in claim 1, wherein said at least one protuberance is selected from the group of projections and bristles.

77. (New) Apparatus as claimed in claim 1, wherein said optical radiation source is adapted to provide radiation at the skin surface with a power density of between approximately 1 mW/cm^2 and approximately 100 W/cm^2 , the radiation depending at least on the condition being treated and the wavelength of the radiation.

78. (New) Apparatus as claimed in claim 77, wherein said optical radiation source is adapted to provide radiation at the skin surface with a power density of between 10 mW/cm^2 and 10 W/cm^2 .

79. (New) Apparatus as claimed in claim 74, wherein said at least one optical radiation source comprises an array of optical radiation sources.

80. (New) Apparatus as claimed in claim 79, wherein said array of optical radiation sources comprises semiconductor radiation-emitting elements.

81. (New) Apparatus as claimed in claim 74, wherein the at least one optical radiation source is operable at different wavelengths to effect a desired treatment protocol.

82. (New) Apparatus as claimed in claim 74, wherein the at least one optical radiation source is a continuous wave radiation source.

83. (New) Apparatus as claimed in claim 80, wherein each of said sources is mounted to deliver optical radiation through at least one corresponding protuberance.

84. (New) Apparatus as claimed in claim 80, wherein said array of optical radiation sources comprises at least one source selected from the group consisting of light-emitting diodes, laser diodes, fiber lasers, fiber lasers with laser diode pumping, superluminescent diodes, vertical cavity surface emitting lasers, incandescent lamps, fluorescent lamps, micro halide lamps, low power lamps, wave- guide laser diodes, fluorescence solid-state light sources, or a combination thereof.

85. (New) Apparatus as claimed in claim 81, wherein said array of optical radiation sources comprises identical sources.

86. (New) Apparatus as claimed in claim 81, wherein said array of optical radiation sources comprises different sources.

87. (New) Apparatus as claimed in claim 74, wherein said applicator is adapted to be hand-held.

88. (New) Apparatus as claimed in claim 74, further comprising a pressure sensor coupled to said at least one protuberance and to said at least one optical radiation source, said pressure

sensor being configured to activate said at least one optical radiation source only when said at least one protuberance is in contact with skin.

89. (New) Apparatus as claimed in claim 74, wherein said skin contacting surface of said at least one protuberance is pointed.

90. (New) Apparatus as claimed in claim 74, wherein said applicator is adapted to deliver at least a portion of the optical radiation through the at least one protuberance.

91. (New) Apparatus as claimed in claim 74 wherein said at least one protuberance comprises an optically transparent material.

92. (New) Apparatus as claimed in claim 74, said applicator further comprising a means to apply a lotion, drug or topical substance onto skin.

93. (New) Apparatus as claimed in claim 92, wherein said means comprise openings in said applicator through which said lotion, drug, or topical substance is delivered to skin.

94. (New) Apparatus as claimed in claim 74, said applicator further comprising a total internal reflection mechanism to prevent at least a portion of the optical radiation from passing through said skin-contacting surface unless in contact with skin.

95. (New) A method for treatment of skin, comprising:

applying a compressive force to a skin surface with at least one protuberance extending from an applicator, the at least one protuberance shaped to extend at least partially below the skin surface upon application of said compressive force; and

delivering optical radiation to a target area of skin through the at least one protuberance in contact with the skin surface.

96. (New) The method of claim 95 wherein an applied compressive force enhances optical radiation delivery to the target area.

97. (New) The method of claim 95, wherein delivering optical radiation comprises activating an optical radiation source in said applicator and coupled to said protuberance.

98. (New) Apparatus for treatment of skin, comprising:

an applicator having at least one protuberance comprising a skin-contacting surface, and
at least one optical radiation source coupled to said applicator in a manner so as to, when activated, deliver optical radiation through said skin-contacting surface to skin in contact with said skin-contacting surface;

wherein said at least one protuberance is adapted to abrade or clean said skin as the applicator is moved thereover by removing any of at least a portion of said skin, at least a portion of bacteria, at least a portion of residue, or at least a portion of surface obstructions on said skin.

99. (New) Apparatus as claimed in claim 97 wherein said applicator is in the form of a brush adapted to be moved over the skin as radiation is applied thereto.

100. (New) Apparatus as claimed in claim 97, wherein said at least one protuberance is selected from the group of projections and bristles.

101. (New) Apparatus as claimed in claim 97, wherein said at least one protuberance is adapted to apply a compressive force to said skin during use.

102. (New) Apparatus as claimed in claim 97, wherein said optical radiation source is adapted to provide radiation at the skin surface with a power density of between approximately 1 mW/cm^2 and approximately 100 W/cm^2 , the radiation depending at least on the condition being treated and the wavelength of the radiation.

103. (New) Apparatus as claimed in claim 102, wherein said optical radiation source is adapted to provide radiation at the skin surface with a power density of between 10 mW/cm^2 and 10 W/cm^2 .

104. (New) Apparatus as claimed in claim 97, wherein said at least one optical radiation source comprises an array of optical radiation sources.

105. (New) Apparatus as claimed in claim 104, wherein said array of optical radiation sources comprises semiconductor radiation-emitting elements.

106. (New) Apparatus as claimed in claim 97, wherein the at least one optical radiation source is operable at different wavelengths to effect a desired treatment protocol.

107. (New) Apparatus as claimed in claim 97, wherein the at least one optical radiation source is a continuous wave radiation source.

108. (New) Apparatus as claimed in claim 104, wherein each of said sources is mounted to deliver optical radiation through at least one corresponding protuberance.

109. (New) Apparatus as claimed in claim 104, wherein said array of optical radiation sources comprises at least one source selected from the group consisting of light-emitting diodes, laser diodes, fiber lasers, fiber lasers with laser diode pumping, superluminescent diodes, vertical cavity surface emitting lasers, incandescent lamps, fluorescent lamps, micro halide lamps, low power lamps, wave- guide laser diodes, fluorescence solid-state light sources, or a combination thereof.

110. (New) Apparatus as claimed in claim 104, wherein said array of optical radiation sources comprises identical sources.

111. (New) Apparatus as claimed in claim 104, wherein said array of optical radiation sources comprises different sources.

112. (New) Apparatus as claimed in claim 97, wherein said at least one protuberance is adapted to remove at least a portion of said skin that comprises dead skin.

113. (New) Apparatus as claimed in claim 97, wherein said applicator is adapted to be hand-held.

114. (New) Apparatus as claimed in claim 97, further comprising a pressure sensor coupled to said at least one protuberance and to said at least one optical radiation source, said pressure sensor being configured to activate said at least one optical radiation source only when said at least one protuberance is in contact with skin.

115. (New) Apparatus as claimed in claim 97, wherein said at least one protuberance is adapted to rotate or vibrate.

116. (New) Apparatus as claimed in claim 97, wherein said at least one protuberance is adapted to peel at least a portion of said skin to remove said portion of skin.

117. (New) Apparatus as claimed in claim 97, wherein said skin contacting surface of said at least one protuberance is pointed.

118. (New) Apparatus as claimed in claim 97 wherein said applicator is adapted to deliver at least a portion of the optical radiation through said at least one protuberance.

119. (New) Apparatus as claimed in claim 97 wherein said at least one protuberance comprises an optically transparent material.

120. (New) Apparatus as claimed in claim 97 wherein said at least one protuberance comprises a microsurface profile adapted to cause trauma to said skin.

121. (New) Apparatus as claimed in claim 97, said applicator further comprising a means to apply a lotion, drug or topical substance onto skin.

122. (New) Apparatus as claimed in claim 121, wherein said means comprise openings in said applicator through which said lotion, drug or topical substance is delivered to skin.